

## NEW T8 LED RETROFIT TUBE

(Replace T8 Fluorescent Tube)

Patent Number: 201530468283.8



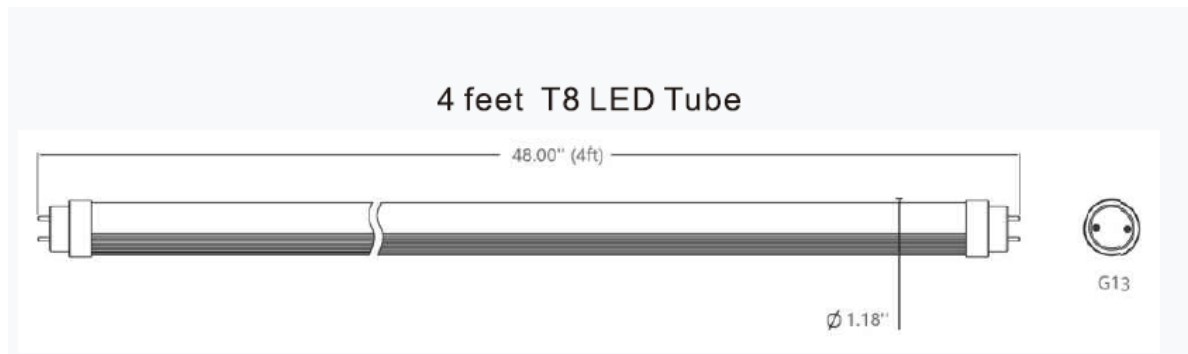
### PRODUCT DESCRIPTION:

Lighting Direct, LP New T8 LED retrofit tube is the ideal plug and play solution that works straight out of the box. Designed to deliver over 1940 lumens, these energy-saving LED lamps are quick, easy and safe to install into existing linear fluorescent fixtures without any extra effort or re-wiring. Lighting Direct, LP New T8 LED retrofit tube utilizes the existing T8 instant-start electronic ballasts, thus minimizing maintenance and labor costs.

- Input Voltage: 01/, 166 VAC, determined by fluorescent a'kk'rs
- De>b'bx01/ lm/W
- Compatible with most electronic instant-start T8 ballasts
- All Tube construction with01/©beam angle
- Color Rendering Index (CRI): ≥72
- 100,000 hour life
- THD <20%
- Power Factor: 0.9 nominal
- Dimmable (ballast dependent)
- 6 year khlhsdσ'qq'msx
- Suitable for use in dry locations
- Suitable for use in totally enclosed recessed fixture
- Not for use with T12 magnetic or electronic ballasts
- Not for use with T8 magnetic or HO ballasts
- Not for use or to be wired to "mains voltage"

MODEL : CL-DN4T8LEDRT-18W

DIMENSION:



**SPECIFICATIONS:**
**4 - FOOT**

ITEM	SPECIFICATION	DETAILS
GENERAL PERFORMANCE	Power Consumption	18W
	Lumens Delivered	2200 lm
	Efficacy	120 lm/W
	CRI	83
	Beam Angle	120
	Color Temperature (CCT)	4000K, 5000K
	Lumen Maintenance (L70)	100,000 hours
ELECTRICAL	Power Factor	0.9
	Input Voltage	120-277 VAC
PHYSICAL	Operating Temperature	-4°F to 113°F
CERTIFICATION	Certification	ETL DLC FCC NSF
	Material Usage	RoHS compliant, no mercury
	Environment	Dry
	Warranty	7 Years

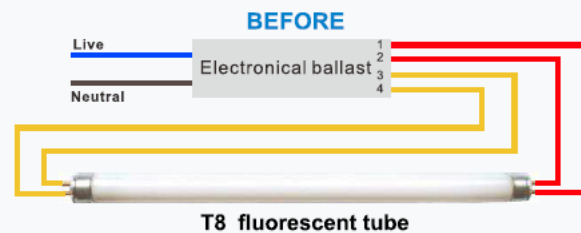
## Installation Instruction



**Switch off power supply BEFORE COMMENCING WORK**

### Installation Steps:

1. Turn off power
2. Remove the T8 fluorescent tube
3. Clip in the New T8 LED Retrofit Tube upgrade-Clip in the New T8 LED Retrofit Tube
4. Turn on the power and installation is completed





## Lighting Direct, LP - New LED T8 Retrofit Tube Compatible Ballasts List

Item	Manufacturer	Model	Type
1	Philips-Advance	ICN-1P32-N	Instant Start Ballast
2	Philips-Advance	ICN-2P32-N	Instant Start Ballast
3	Philips-Advance	ICN-3P32-N	Instant Start Ballast
4	Philips-Advance	ICN-4P32-N	Instant Start Ballast
5	Philips-Advance	IOPA-1P32-N	Instant Start Ballast
6	Philips-Advance	IOPA-2P32-N	Instant Start Ballast
7	Philips-Advance	IOPA-3P32-N	Instant Start Ballast
8	Philips-Advance	IOPA-4P32-N	Instant Start Ballast
9	Philips-Advance	IOPA-1P32-HL-SC	Instant Start Ballast
10	Philips-Advance	IOPA-2P32-HL-SC	Instant Start Ballast
11	Philips-Advance	IOPA-3P32-HL-SC	Instant Start Ballast
12	Philips-Advance	IOPA-4P32-HL-SC	Instant Start Ballast
13	Philips-Advance	ICN-1P32-SC	Instant Start Ballast
14	Philips-Advance	ICN-2P32-SC	Instant Start Ballast
15	Philips-Advance	ICN-3P32-SC	Instant Start Ballast
16	Philips-Advance	ICN-4P32-SC	Instant Start Ballast
17	Philips-Advance	REB-1P32-SC	Instant Start Ballast
18	Philips-Advance	REB-2P32-SC	Instant Start Ballast
19	Philips-Advance	REB-3P32-SC	Instant Start Ballast
20	Philips-Advance	REB-4P32-SC	Instant Start Ballast
21	Philips-Advance	IOP-1P32-LW-SC	Instant Start Ballast
22	Philips-Advance	IOP-2P32-LW-SC	Instant Start Ballast
23	Philips-Advance	IOP-3P32-LW-SC	Instant Start Ballast
24	Philips-Advance	IOP-4P32-LW-SC	Instant Start Ballast
25	Philips-Advance	IOPA-1P32-LW-N	Instant Start Ballast
26	Philips-Advance	IOPA-2P32-LW-N	Instant Start Ballast
27	Philips-Advance	IOPA-3P32-LW-N	Instant Start Ballast
28	Philips-Advance	IOPA-4P32-LW-N	Instant Start Ballast
29	Philips-Advance	IOPA-1P32-N	Instant Start Ballast
30	Philips-Advance	IOPA-2P32-N	Instant Start Ballast
31	Philips-Advance	IOPA-3P32-N	Instant Start Ballast
32	Philips-Advance	IOPA-4P32-N	Instant Start Ballast
33	Philips-Advance	IOP-1P32-SC	Instant Start Ballast
34	Philips-Advance	IOP-2P32-SC	Instant Start Ballast
35	Philips-Advance	IOP-3P32-SC	Instant Start Ballast
36	Philips-Advance	IOP-4P32-SC	Instant Start Ballast
37	Philips-Advance	IOPA-1P32-HL-SC	Instant Start Ballast
38	Philips-Advance	IOPA-2P32-HL-SC	Instant Start Ballast
39	Philips-Advance	IOPA-3P32-HL-SC	Instant Start Ballast
40	Philips-Advance	IOPA-4P32-HL-SC	Instant Start Ballast
41	Philips-Advance	IOP-1PSP32-HL-SC	Program Start Ballast
42	Philips-Advance	IOP-2PSP32-HL-SC	Program Start Ballast
43	Philips-Advance	IOP-3PSP32-HL-SC	Program Start Ballast

Item	Manufacturer	Model	Type
44	Philips-Advance	IOP-4PSP32-HL-SC	Program Start Ballast
45	Philips-Advance	IOP-1PSP32-HL-SC	Program Start Ballast
46	Philips-Advance	IOP-2PSP32-HL-SC	Program Start Ballast
47	Philips-Advance	IOP-3PSP32-HL-SC	Program Start Ballast
48	Philips-Advance	IOP-4PSP32-HL-SC	Program Start Ballast
49	Philips-Advance	IOP-1PSP32-LW-SC	Program Start Ballast
50	Philips-Advance	IOP-2PSP32-LW-SC	Program Start Ballast
51	Philips-Advance	IOP-3PSP32-LW-SC	Program Start Ballast
52	Philips-Advance	IOP-4PSP32-LW-SC	Program Start Ballast
53	Philips-Advance	IOP-1PSP32-SC	Program Start Ballast
54	Philips-Advance	IOP-2PSP32-SC	Program Start Ballast
55	Philips-Advance	IOP-3PSP32-SC	Program Start Ballast
56	Philips-Advance	IOP-4PSP32-SC	Program Start Ballast
57	Philips-Advance	GOPA-1P32-SC	Instant Start Ballast
58	Philips-Advance	GOPA-2P32-SC	Instant Start Ballast
59	Philips-Advance	GOPA-3P32-SC	Instant Start Ballast
60	Philips-Advance	GOPA-4P32-SC	Instant Start Ballast
61	Philips-Advance	GOP-1PSP32-SC	Instant Start Ballast
62	Philips-Advance	GOP-2PSP32-SC	Instant Start Ballast
63	Philips-Advance	GOP-3PSP32-SC	Instant Start Ballast
64	Philips-Advance	GOP-4PSP32-SC	Instant Start Ballast
65	Philips-Advance	GOPA-1P32-LW-SC	Instant Start Ballast
66	Philips-Advance	GOPA-2P32-LW-SC	Instant Start Ballast
67	Philips-Advance	GOPA-3P32-LW-SC	Instant Start Ballast
68	Philips-Advance	GOPA-4P32-LW-SC	Instant Start Ballast
69	Philips-Advance	HOP-2PSP32-HL-SC	Program Start Ballast
70	Philips-Advance	HOP-3PSP32-HL-SC	Program Start Ballast
71	Philips-Advance	HOP-4PSP32-HL-G	Program Start Ballast
72	Philips-Advance	IOP-3P32-HL-90-SC	Instant Start Ballast
73	Philips-Advance	IOPA-4P32-HL-90-SC	Instant Start Ballast
74	Philips-Advance	RELB-2S40-N	Rapid Start Ballast
75	Philips-Advance	ICN-2S40-N	Rapid Start Ballast
76	Philips-Advance	ICN-2S24	Program Start Ballast
77	Philips-Advance	leN-2S24-N	Program Start Ballast
78	Philips-Advance	ICN-2S39	Program Start Ballast
79	Philips-Advance	ICN-2S39-N	Program Start Ballast
80	Philips-Advance	ICN-2S28	Program Start Ballast
81	Philips-Advance	ICN-2S28-N	Program Start Ballast
82	Philips-Advance	ICN-2S54	Program Start Ballast
83	Philips-Advance	ICN-2S54-N	Program Start Ballast
84	GE	GE-132-MAX-N/Ultra	Instant Start Ballast
85	GE	GE-232-MAX-N/Ultra	Instant Start Ballast
86	GE	GE-332-MAX-N/Ultra	Instant Start Ballast

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Item	Manufacturer	Model	Type	Item	Manufacturer	Model	Type
87	GE	GE-432-MAX-N/Ultra	Instant Start Ballast	130	GE	487-XLH-TC-P-IP	Rapid Start Ballast
88	GE	GE-132-MAX-L/Ultra	Instant Start Ballast	131	GE	960-VLH-TC-P-IP	Rapid Start Ballast
89	GE	GE-232-MAX-L/Ultra	Instant Start Ballast	132	GE	532-BR-TC-P-IP	Instant Start Ballast
90	GE	GE-332-MAX-L/Ultra	Instant Start Ballast	133	GE	213-TC-P-IP	Instant Start Ballast
91	GE	GE-432-MAX-L/Ultra	Instant Start Ballast	134	GE	B132IUNVHE-A	Program Rapid Start Ballast
92	GE	GE-132-MAX-H/Ultra	Instant Start Ballast	135	GE	B232IUNVHE-A	Program Rapid Start Ballast
93	GE	GE-232-MAX-H/Ultra	Instant Start Ballast	136	GE	B332IUNVHE-A	Program Rapid Start Ballast
94	GE	GE-332-MAX-H/Ultra	Instant Start Ballast	137	SYLVANIA	QHE 1x32T8/UNV ISL-SC	Instant Start Ballast
95	GE	GE-432-MAX-H/Ultra	Instant Start Ballast	138	SYLVANIA	QHE 2x32T8/UNV ISL-SC	Instant Start Ballast
96	GE	B132PUNVHP-N	Program Rapid Start Ballast	139	SYLVANIA	QHE 3x32T8/UNV ISL-SC	Instant Start Ballast
97	GE	B232PUNVHP-N	Program Rapid Start Ballast	140	SYLVANIA	QHE 4x32T8/UNV ISL-SC	Instant Start Ballast
98	GE	B332PUNVHP-A	Program Rapid Start Ballast	141	SYLVANIA	QHE 1X32T8/UNV ISN-SC	Instant Start Ballast
99	GE	B432PUNVHP-A	Program Rapid Start Ballast	142	SYLVANIA	QHE 2X32T8/UNV ISN-SC	Instant Start Ballast
100	GE	B332 347HP	Program Rapid Start Ballast	143	SYLVANIA	QHE 3X32T8/UNV ISN-SC	Instant Start Ballast
101	GE	B228PUNV-C	Program Rapid Start Ballast	144	SYLVANIA	QHE 4X32T8/UNV ISN-SC	Instant Start Ballast
102	GE	B224PUNV-C	Program Rapid Start Ballast	145	SYLVANIA	QHE 1X32T8/UNV ISH-SC	Instant Start Ballast
103	GE	B239PUNV-D	Program Rapid Start Ballast	146	SYLVANIA	QHE 2X32T8/UNV ISH-SC	Instant Start Ballast
104	GE	B254PUNV-D	Program Rapid Start Ballast	147	SYLVANIA	QHE 3X32T8/UNV ISH-SC	Instant Start Ballast
105	GE	B140R120HP	Instant Start Ballast	148	SYLVANIA	QHE 4X32T8/UNV ISH-SC	Instant Start Ballast
106	GE	B140R277HP	Instant Start Ballast	149	SYLVANIA	QTP 1X32T8/UNV ISL-SC	Instant Start Ballast
107	GE	B240R120HP	Instant Start Ballast	150	SYLVANIA	QTP 2X32T8/UNV ISL-SC	Instant Start Ballast
108	GE	B240R277HP	Instant Start Ballast	151	SYLVANIA	QTP 3X32T8/UNV ISL-SC	Instant Start Ballast
109	GE	B332 347HP	Instant Start Ballast	152	SYLVANIA	QTP 4X32T8/UNV ISL-SC	Instant Start Ballast
110	GE	B340R120HP	Program Rapid Start Ballast	153	SYLVANIA	QTP 1X32T8/UNV ISN-SC	Instant Start Ballast
111	GE	B340R277HP	Program Rapid Start Ballast	154	SYLVANIA	QTP 2X32T8/UNV ISN-SC	Instant Start Ballast
112	GE	B260 120HP	Instant Start Ballast	155	SYLVANIA	QTP 3X32T8/UNV ISN-SC	Instant Start Ballast
113	GE	B260 277HP	Instant Start Ballast	156	SYLVANIA	QTP 4X32T8/UNV ISN-SC	Instant Start Ballast
114	GE	B260 20RH	Instant Start Ballast	157	SYLVANIA	QTP 1X32T8/UNV ISH-SC	Instant Start Ballast
115	GE	B260 277RH	Instant Start Ballast	158	SYLVANIA	QTP 2X32T8/UNV ISN-SC	Instant Start Ballast
116	GE	697-L-TC-P-IP	Rapid Start Ballast	159	SYLVANIA	QTP 3X32T8/UNV ISN-SC	Instant Start Ballast
117	GE	573-L-TC-P-IP	Rapid Start Ballast	160	SYLVANIA	QTP 4X32T8/UNV ISN-SC	Instant Start Ballast
118	GE	588-L-TC-P-IP	Rapid Start Ballast	161	SYLVANIA	QTP 1X32T8/UNV PSX-TC	Program Start Ballast
119	GE	413-C-TC-P-IP	Rapid Start Ballast	162	SYLVANIA	QTP 2X32T8/UNV PSX-TC	Program Start Ballast
120	GE	412-L-SLH-TC-P-IP	Rapid Start Ballast	163	SYLVANIA	QTP 3X32T8/UNV PSX-TC	Program Start Ballast
121	GE	458-L-SLH-TC-P-I	Rapid Start Ballast	164	SYLVANIA	QTP 4X32T8/UNV PSX-TC	Program Start Ballast
122	GE	446-L-SLH-TC-P	Rapid Start Ballast	165	SYLVANIA	QTP 1X32T8/UNV PSN-TC	Program Start Ballast
123	GE	537-L-TC-P-I	Rapid Start Ballast	166	SYLVANIA	QTP 2X32T8/UNV PSN-TC	Program Start Ballast
124	GE	443-L-SLH-T-P	Rapid Start Ballast	167	SYLVANIA	QTP 3X32T8/UNV PSN-TC	Program Start Ballast
125	GE	490-XLH-TC-P	Rapid Start Ballast	168	SYLVANIA	QTP 4X32T8/UNV PSN-TC	Program Start Ballast
126	GE	627-LLH-TC-P-IP	Rapid Start Ballast	169	SYLVANIA	QHE2x32T8/UNV-PSH-HT	Program Start Ballast
127	GE	480-SLH-TC-P-IP	Rapid Start Ballast	170	SYLVANIA	QHE3x32T8/UNV-PSH-HT	Program Start Ballast
128	GE	480-XLH-TC-P-IP	Rapid Start Ballast	171	SYLVANIA	QHE4x32T8/UNV-PSH-HT	Program Start Ballast
129	GE	487-SLH-TC-P-IP	Rapid Start Ballast	172	SYLVANIA	OHE 1X32T8/347 ISL-SC	Instant Start Ballast

Please contact Lighting Direct, LP for questions about third party ballasts that are not on this list.



## Lighting Direct, LP - New LED T8 Retrofit Tube Compatible Ballasts List

Item	Manufacturer	Model	Type
173	SYLVANIA	OHE 2X32T8/347 ISL-SC	Instant Start Ballast
174	SYLVANIA	OHE 3X32T8/347 ISL-SC	Instant Start Ballast
175	SYLVANIA	OHE 4X32T8/347 ISL-SC	Instant Start Ballast
176	SYLVANIA	OHE 1X32T8/347 ISN-SC	Instant Start Ballast
177	SYLVANIA	OHE 2X32T8/347 ISN-SC	Instant Start Ballast
178	SYLVANIA	OHE 3X32T8/347 ISN-SC	Instant Start Ballast
179	SYLVANIA	OHE 4X32T8/347 ISN-SC	Instant Start Ballast
180	SYLVANIA	QT2X32T8/347 ISL-SC	Instant Start Ballast
181	SYLVANIA	QT4X32T8/347 ISL-SC	Instant Start Ballast
182	SYLVANIA	QTP1X32T8/347 ISN-SC	Instant Start Ballast
183	SYLVANIA	QTP2X32T8/347 ISN-SC	Instant Start Ballast
184	SYLVANIA	QT3X32T8/347 ISN-SC	Instant Start Ballast
185	SYLVANIA	QT4X32T8/347 ISN-SC	Instant Start Ballast
186	SYLVANIA	QT2X32T8/347 ISH-SC	Instant Start Ballast
187	SYLVANIA	QTP 2x39-24T5HO/UNV PSN NL	Program Start Ballast
188	SYLVANIA	QTP 2x39-24T5HO/UNV PSN NL	Program Start Ballast
189	SYLVANIA	QTP 2x54 T5HO/UNV PSN NL	Program Start Ballast
190	SYLVANIA	QTP 2x28 T5/UNV PSN NL	Program Start Ballast
191	SYLVANIA	QTP 2x54 T5HO/UNV PSN HT NL	Program Rapid Start Ballast
192	SYLVANIA	QTP 4x54 T5HO/UNV PSN HTW NL	Program Rapid Start Ballast
193	GE	GE-232-120RED-DIY	Instant Start Ballast
194	GE	GE-432-120RED-DIY	Instant Start Ballast
195	GE	GE-232-120-N	Instant Start Ballast
196	GE	GE-432-120-N	Instant Rapid Start Ballast
197	GE	GE-132-MV-N	Instant Start Start Ballast
198	GE	GE-232-MV-N	Instant Start Start Ballast
199	GE	GE-332-MV-N	Instant Start Ballast
200	GE	GE-432-MV-N	Instant Start Ballast
201	GE	GE-132-MV-N-DIY	Instant Start Ballast
202	GE	GE-232-MV-N-DIY	Instant Start Ballast
203	GE	GE-332-MV-N-DIY	Instant Start Ballast
204	GE	GE-432-MV-N-DIY	Instant Start Ballast
205	GE	GE232MAX347-N	Instant Start Ballast
206	GE	GE432MAX347-N	Instant Start Ballast
207	SUNPARK	U-1/32ISE-HBF	Instant Start Ballast
208	SUNPARK	U-2/32ISE-HBF	Instant Start Ballast
209	SUNPARK	U-3/32ISE-HBF	Instant Start Ballast
210	SUNPARK	U-4/32ISE-HBF	Instant Start Ballast
211	SUNPARK	U-1/32ISE-LBF	Instant Start Ballast
212	SUNPARK	U-2/32ISE-LBF	Instant Start Ballast
213	SUNPARK	U-3/32ISE-LBF	Instant Start Ballast
214	SUNPARK	U-4/32ISE-LBF	Instant Start Ballast
215	HOWARD	EP3/32IS/IMV/MC/HE	Instant Start Ballast

Item	Manufacturer	Model	Type
216	KEYSTONE	KTEB-432-UV-IS-N-P	Instant Start Ballast
217	KEYSTONE	KTEB-432-UV-IS-N-P	Instant Start Ballast
218	PROLUME	EP232IS/L/MV/SL	Instant Start Ballast
219	PROLUME	EP232IS/L/MV/HE	Instant Start Ballast
220	RADIONIC	E232H12	Instant Start Ballast

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